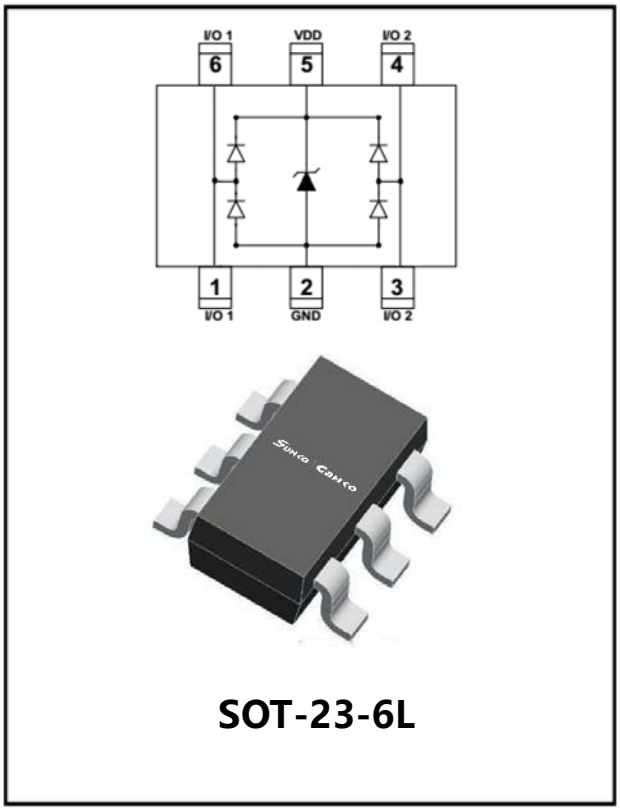
2-Line, Uni-directional, Ultra-low Capacitance, Transient Voltage Suppressor



Features

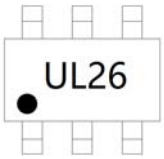
- Stand-off voltage: 5V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 5A (8/20μs)
- Ultra-low capacitance: C_J = 1 pF Max
- Low leakage current
- Low clamping voltage
- Compliant

Applications

- USB 2.0 power and data line
- Cellular Handsets and Accessories
- Touch Panels
- Digital Cameras
- Notebook Computers
- SIM Ports
- 10/100/1000 Ethernet

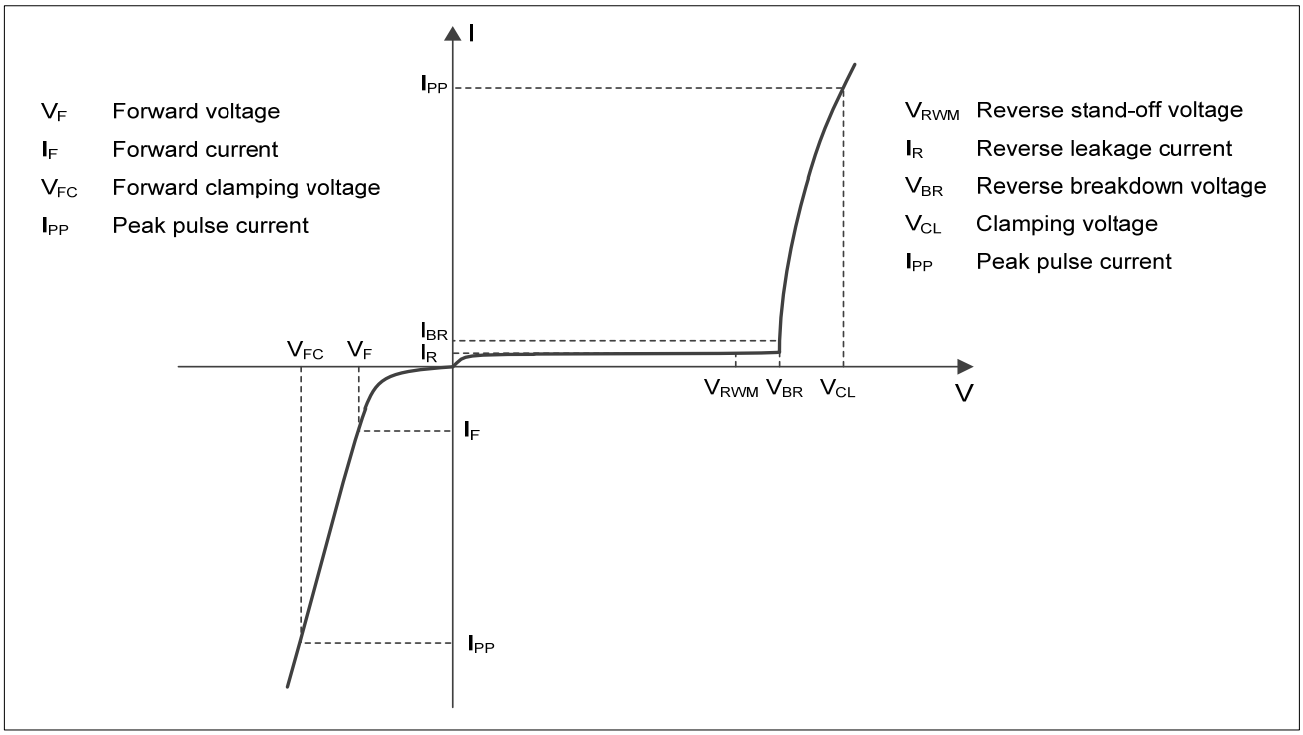
Mechanical Characteristics

- Package: SOT-23-6L
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 1 per J-STD-020
- Marking Information: See Below



UL26 = Device Marking Code
Dot denotes Pin1

■Definitions of electrical characteristics



■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	90	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	5	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	-55~125	°C
Storage temperature	T_{STG}	-55~150	°C

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

I/O Pins

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V	Any I/O Pin to ground			5.0
Reverse leakage current	I_R	μA	V_{RWM} =5V, any I/O Pin to ground			1
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA, any I/O pin to ground	6.1		9.6
Clamping voltage 2)	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs, any I/O pin to ground			12
		V	I_{PP} = 5A, t_p = 8/20μs, any I/O pin to ground			17
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz, Any I/O pin to ground		0.8	1.0
			V_R = 0V, f = 1MHz Between I/O pins		0.4	0.5

Notes：

(1). TLP parameter: Z0 = 50Ω, tp = 100ns, tr = 2ns, averaging window from 60ns to 80ns. RDYN is calculated from 4A to 16A.

(2). Non-repetitive current pulse, according to IEC61000-4-5

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SRL05	Approximate 15.85	3000	30000	120000	Tape & reel

■Typical Performance Characteristics (Ta=25°C unless otherwise Specified)

Fig.1 8/20μs waveform per IEC61000-4-5

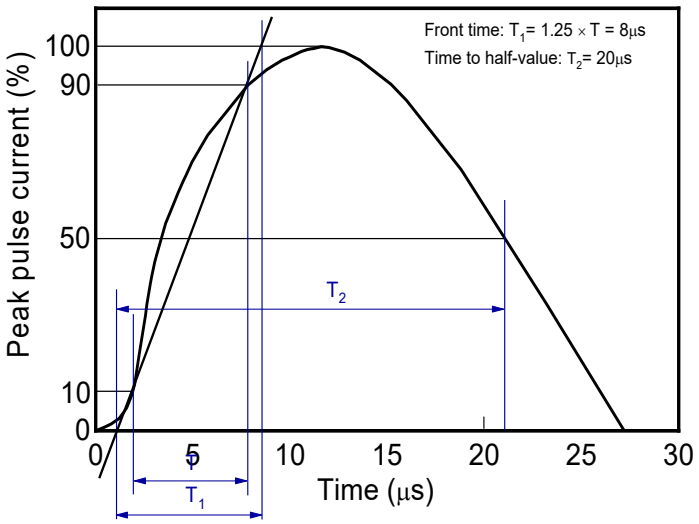


Fig.2 Contact discharge current waveform per IEC61000-4-2

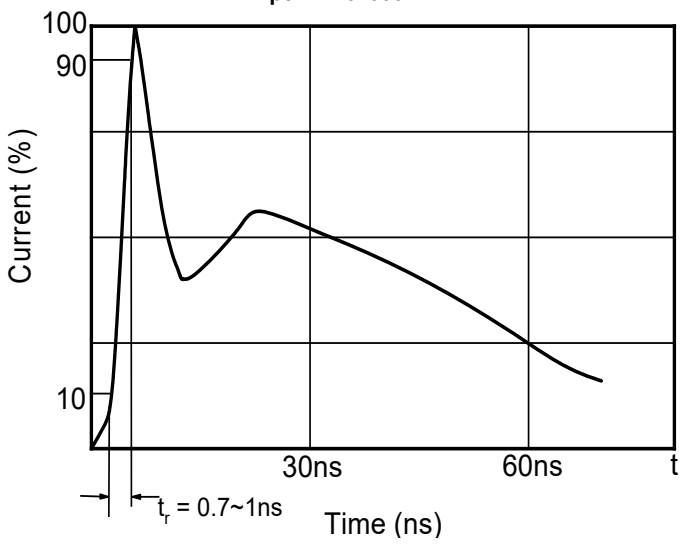


Fig.3 Clamping voltage vs. Peak pulse current

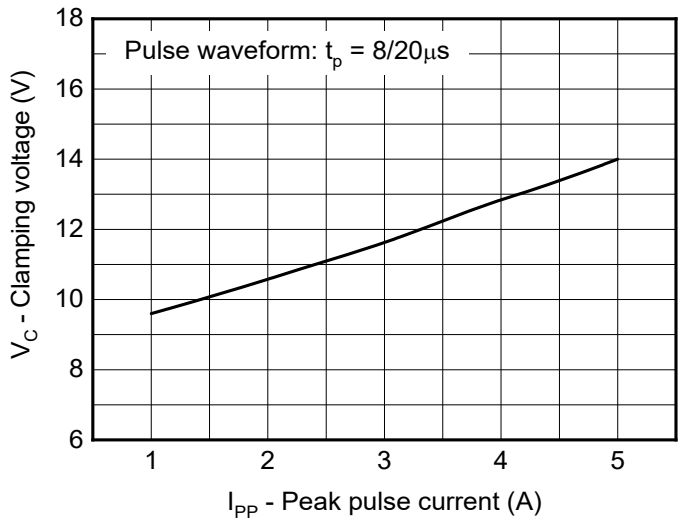


Fig.4 Capacitance vs. Reverse voltage

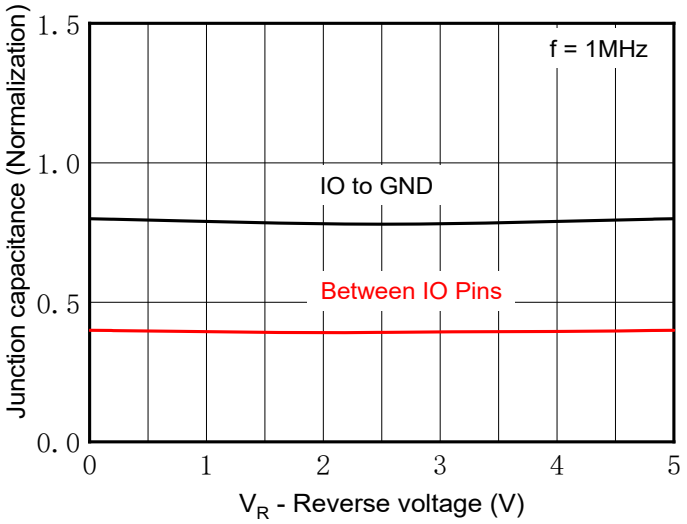


Fig.5 Non-repetitive peak pulse power vs. Pulse time

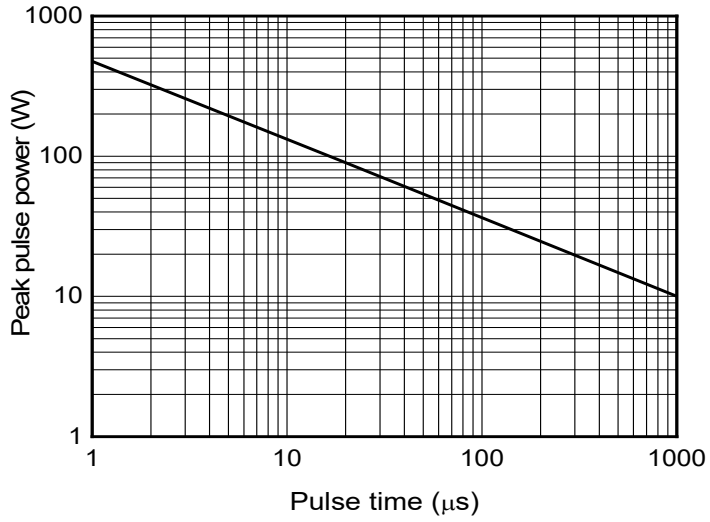
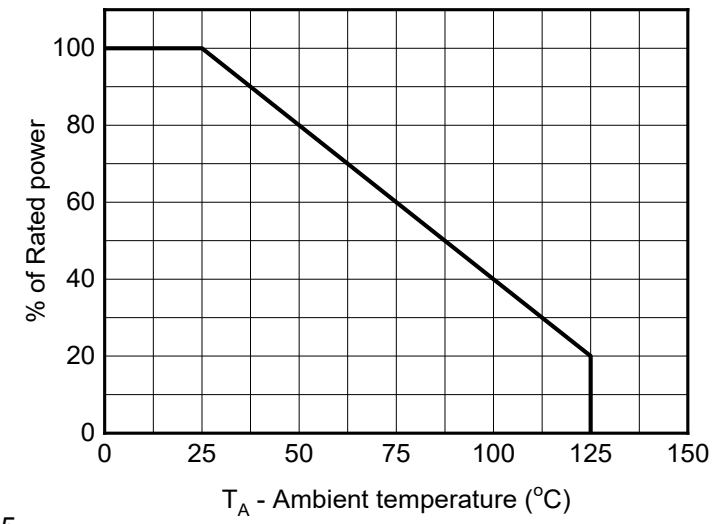
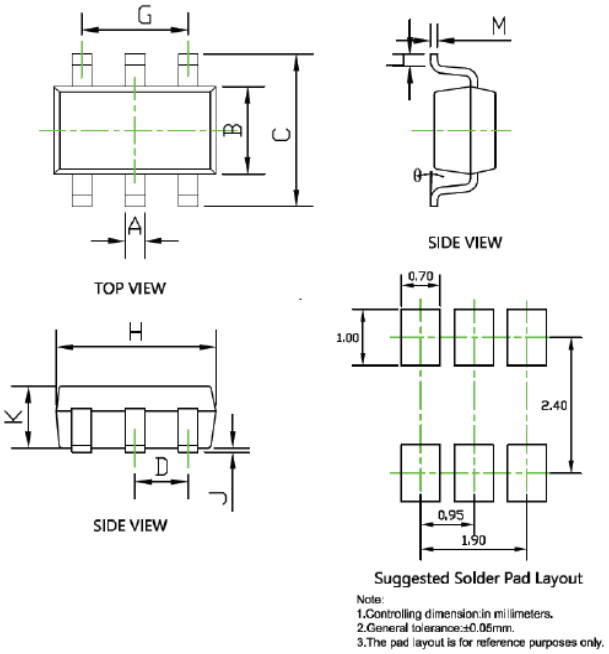


Fig.6 Power derating vs. Ambient temperature



■SOT-23 6L Package Outline Drawing

SOT-23-6L



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.012	0.020	0.300	0.500
B	0.059	0.067	1.500	1.700
C	0.104	0.116	2.650	2.950
D	0.037BSC		0.950BSC	
G	0.075BSC		1.900BSC	
H	0.111	0.119	2.820	3.020
J	0.000	0.004	0.000	0.100
K	0.041	0.045	1.050	1.150
L	0.012	0.024	0.300	0.600
M	0.004	0.008	0.100	0.200
θ	0°	8°	0°	8°

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